

## CLAIMS

What is claimed is:

1. A flexible circuit adapted to connect a driver circuit and an optical assembly, said flexible circuit comprising:
  - a first transmission line adapted to deliver a first signal from the driver circuit to the optical assembly, said first transmission line comprising a first end adapted to connect to the driver circuit and a second end adapted to connect to the optical assembly; and
  - a second transmission line used to bias said first signal, said second transmission line being electrically connected to said second end of said first transmission line.
2. A flexible circuit as recited in claim 1, wherein said at least one first transmission line further comprises a matching impedance.
3. A flexible circuit as recited in claim 2, wherein said at least one second transmission line is electrically connected to said at least one first transmission line between said matching impedance and said optical assembly.
4. A flexible circuit as recited in claim 1, wherein said optical assembly comprises a laser diode.
5. A flexible circuit as recited in claim 1, wherein an end of said at least one second transmission line is electrically connected to a direct current source.

6. A flexible circuit as recited in claim 1, wherein said first signal is an alternating current signal.

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7. A transceiver for use in transceiving signals, the transceiver comprising:  
a first transmission line comprising a first end and a second end, said first transmission line electrically connected at said first end to a means for generating modulated signals and electrically connected at said second end to a means for generating optical signals based upon said modulated signals; and  
electrically connected to said second end of said first transmission line,  
means for biasing said modulated signals.

8. A transceiver as recited in claim 7, wherein said means for generating one or more modulated signals comprises a laser driver.

9. A transceiver as recited in claim 7, wherein said means for generating optical signals comprises a laser diode.

10. A transceiver as recited in claim 7, further comprising a flexible circuit incorporating said first transmission line and said second transmission line and electrically connecting said means for generating modulated signals to said means for generating optical signals based upon said modulated signals.

11. A transceiver as recited in claim 7, further comprising a current source, said current source configured to deliver a bias current to said means for generating optical signals.

12. A flexible circuit as recited in claim 7, wherein an end of said second transmission line is electrically connected to a direct current source.

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13. A transceiver for use in transceiving optical signals, the transceiver comprising:

a driver circuit adapted to deliver a signal to an optical assembly along a first transmission line, said first transmission line comprising a first end electrically connected to said driver circuit and a second end electrically connected to said optically assembly;

a current source in communication with said optical assembly and adapted to provided a bias current to said optical assembly; and

a second transmission line electrically connecting said current source to said optical assembly, said second transmission line being connected to said second end of said first transmission line.

14. A transceiver as recited in claim 13, wherein said driver circuit is a laser driver circuit.

15. A transceiver as recited in claim 13, wherein said signal is delivered to said optical assembly at a rate of at least 10 Gigabits/second.

16. A transceiver as recited in claim 13, wherein said signal is delivered to said optical assembly at a rate of less than 10 Gigabits/second.

17. A transceiver as recited in claim 13, wherein said voltage source is a direct current source.

18. A transceiver as recited in claim 13, wherein said first transmission line and said second transmission line are incorporated within a flexible circuit.

19. A transceiver as recited in claim 13, wherein said first transmission line further comprises at least one matching impedance.

20. A transceiver as recited in claim 19, wherein said second transmission line connects to said first transmission line between said at least one matching impedance and said optical assembly.

21. A transceiver as recited in claim 19, wherein said at least one matching impedance is between 5  $\Omega$  and 25  $\Omega$ .

22. A transceiver as recited in claim 19, wherein said current source generates a bias current, said bias current flowing to said optical assembly without passing through said at least one matching impedance.

23. A transceiver as recited in claim 13, wherein said optical assembly comprises a laser diode.

24. A transceiver as recited in claim 13, wherein said second transmission line has a load of between 5  $\Omega$  and 10 $\Omega$ .

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25. A transceiver for use in transceiving optical signals, the transceiver comprising:

a driver circuit adapted to generate a modulated driver signal deliverable to an optical assembly;

a current source in communication with said optical assembly and adapted to provide a bias current for said optical assembly; and

a flexible circuit electrically connecting at least two of said driver circuit, said direct current source, and said optical assembly, said flexible circuit comprises:

a first transmission line electrically connected to said driver circuit at a first end and to said optical assembly at a second end, said first transmission line being adapted to allow said modulated signal to be delivered to said optical assembly; and

a second transmission line electrically connected to said current source and to said optical assembly, said second transmission line being connected to said second end of said first transmission line.

26. A transceiver as recited in claim 26, wherein said first transmission line comprises said at least one matching impedance.

27. A transceiver as recited in claim 27, wherein said second transmission line is connected to said first transmission line between said at least one matching impedance and said optical assembly.

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